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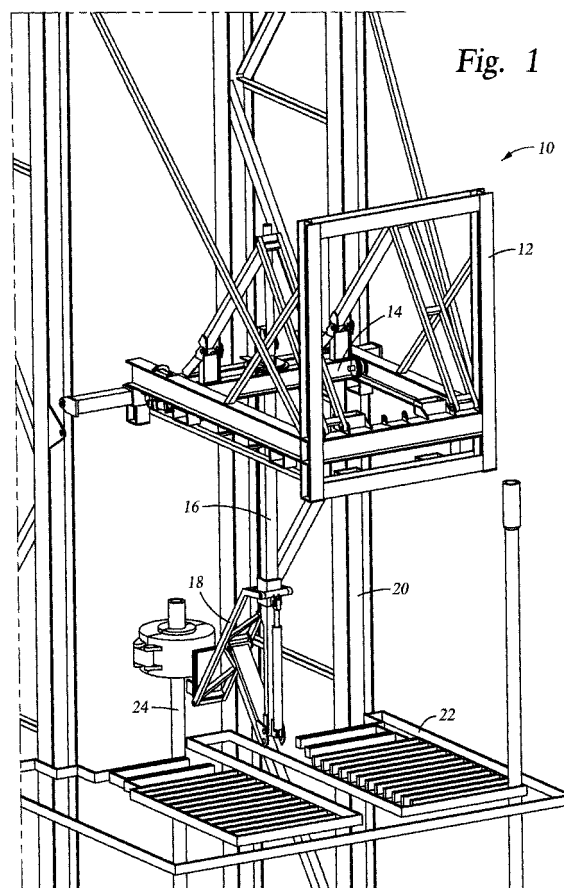
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(54) **A pipe handling system and method**

(57) A pipe handling system (10) includes a frame (12) removably coupled to a drilling mast (20), a gripping arm (18) movably coupled to the frame (12), and a grip jaw (36) extending from the gripping arm (18) to engage a drill pipe (24). The gripping arm (18) and the grip jaw (36) are operable to move a drill pipe (24) from within the drilling mast (20) to a pipe storage area adjacent the drilling mast (20). Other embodiments include a pipe racker (10) and a setback handling system (100) disposed below the pipe racker (10) to engage a lower end of a drill pipe (122).

The setback handling system (100) includes a movable pipe guide (104) and a rotating table (102) supporting the pipe guide (104). In some embodiments, the rotating table (102) also supports a pipe mover (106) for moving the drill pipe (122) to desired storage positions in a setback rack. Pipe handling methods are also disclosed.





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EUROPEAN SEARCH REPORT

Application Number
EP 08 10 0044

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2006/075914 A (ERIKSEN MORTEN [NO]) 20 July 2006 (2006-07-20) * claim 1; figures 3,5,9,10 * * page 16, line 27 - page 17, line 18 * -----	1-5,10, 13-17,19	INV. E21B19/14 E21B19/15 E21B19/20
X	US 4 765 401 A (BOYADJIEFF GEORGE I [US]) 23 August 1988 (1988-08-23) * column 1, line 50 - line 64; figures 1,2,5 *	1-6,10, 12,19,20	
X	US 4 397 605 A (COWGILL CHARLES F [US] ET AL) 9 August 1983 (1983-08-09) * figure 1 * * column 2, line 50 - column 3, line 17 * -----	1-3,10, 12	
A	US 2 773 605 A (DE JARNETT FRANK D) 11 December 1956 (1956-12-11) * column 3, line 43 - line 68; figures 1,2 *	1,14,19	
A	EP 0 234 880 A (MORRIS ROBERT) 2 September 1987 (1987-09-02) * column 5, line 50 - column 6, line 13; figures 5-7 * -----	1,14,19	TECHNICAL FIELDS SEARCHED (IPC) E21B
<p>The present search report has been drawn up for all claims</p>			
Place of search The Hague		Date of completion of the search 27 June 2008	Examiner Dantine, Patrick
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- see annex
- ☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



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LACK OF UNITY OF INVENTION
SHEET B

Application Number

EP 08 10 0044

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-21

A pipe handling system comprising a setback handling system
at the drill floor level

2. claims: 22-33

A pipe handling system comprising a grip jaw to engage and
move the drill pipe.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 10 0044

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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27-06-2008

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